



Unbabel, Inc.

Series A: Accept or Delay?

“If I give you and five people a picture of a cat, it is most likely they are going to recognize that is a cat. But with a translation, there is no ground truth of the right translation. If you give the same text to five different people, they can all produce valid, different translations”

-Vasco Pedro, Co-founder and CEO

It was October 2016. Vasco Pedro, along with his management and co-founding teams, stared at each other with a single sheet of paper in front of them: the term-sheet of a Series A investment.

Unbabel, a SaaS start-up headquartered in San Francisco, California, with offices in both that city and Lisbon, Portugal, was founded in August 2013. Since then, the five founders had accomplished an amazing work. Backed-up by Y Combinator (YC), a business accelerator located in Mountain View, California, Unbabel’s objective was to enable everyone to understand and be understood in any language. It provided a trustworthy, seamless and scalable translation service between companies and their customers. The combination between artificial intelligence and human translation, allowed Unbabel to provide a cheaper and with more quality service when compared to its competitors and industry average.

Unbabel had received three seed financing rounds since 2014, which amounted to \$4.25 million. In October 2016, the company received an offer of \$6.0 million for a Series A financing round. Besides the cash needs, Unbabel’s management team was wondering if accepting this deal was the right decision, and what would be its consequences for both Unbabel founders and team and its previous investors.

The Language Service Market

In 2013, when Unbabel was founded, the options for translation were mostly divided into two extreme solutions. Firstly, professional human translation, which was slow, expensive and, more importantly, not scalable. The second available option, Automatic translation or Machine translation (MT), was faster but lacked the quality demanded by businesses in providing a consistent and unique customer experience. The evolution of technology shaped this market, as translation companies were becoming technology companies. Indeed, the major barrier to enter this market was the level of technology that was required. The market did not give an affordable and trustworthy solution for companies to translate the content and reach a wider range of customers.

By the time the team was thinking about founding Unbabel, the translation market amounted to \$35 billion. As it was expected, most of internet’s content was only available in English, since it was the language with more users. However, there were signs that the market was shifting towards a new trend. In fact, the percentage of online content available in English was decreasing, allowing for other languages to emerge. Since 2011, the percentage of websites only available in English was decreasing, on average, 3% per year. In 2013, 55% of all the websites were only

available in English. As this language was losing its presence on the internet, other languages, such as German, Russian, Spanish, Chinese and Portuguese were increasing its share within the internet and websites.¹(**Exhibit 1** shows the 10 languages mostly used in the internet and the percentage distribution of website content in 2013).

These shifts in the market were originating a huge gap between English and other languages. The growth in number of users with a native language different than English, was not proportional to the increment of internet content in other languages besides English. For most of the internet users, there was still very little content in their native language.

The market suggested that there was room for the translation service to scale and grow, specially because there was a lot of content to be translated and, at the same time, there was a higher portion of internet users that was restricted to a very small fraction of the internet. As the time evolved, companies were trying to translate other sources than traditional media, such as, customer service emails, newsletters, product reviews, among others. Companies that intended to grow internationally needed to offer a variety of languages due to the strong connection between the language content and a consumer's likelihood of making a purchase. A survey showed that 56.2% of consumers ranked the ability to obtain information in their native language higher than the price of the product. Additionally, there was evidence that 72.4% of consumers were more likely to purchase a product described in their native language.²

Moreover, between 2013 and 2015, the language service market increased by 9.72% and was estimated to have a market size equal to 45 billion in 2020³ (**Exhibit 2**). Also, English's share of the internet continued to decrease, attaining a percentage around 30% in 2015. However, the gap between English and other languages was still visible.⁴

Despite the growth in this market during the last years, AI (Artificial Intelligence) application for translation was still lacking the quality it was predicted to have achieved by 2016. In fact, MT developments were far from achieving the quality necessary for business and total automation. The most used machine translator, Google Translator, was a proof of this fact. Additionally, MT was not predicted to replace Human Translation in the short-term since it was not capable of reproducing the sense of humanity and creativity that characterizes a good translation.⁵

During 2016, as a response to the market trends, Google announced that Google Translator would start to use Neural Machine Translation (NMT). This new and more complex technology attempted to provide more accurate results. Despite some advances, this new tool was still not perfect. The translations contained some mistakes and mistranslations that would never be done by human translators⁶. Since it had just been recently created, it was not possible to infer its future prospects nor advantages.

Unbabel's Early Days

Unbabel's founders, Vasco Pedro, João Graça, Bruno Silva and Hugo Silva had worked together before creating this start-up, except Sofia Pessanha. Vasco Pedro, CEO and co-founder of Unbabel, had co-founded two start-ups that did not survive this fast-changing environment. Vasco and other three co-founders had worked together in one of those start-ups. Besides the diversity

¹ W3techs, Historical yearly trends in the usage of content languages for websites

² Kelly, Nataly. 2012. "Speak to Global Customers in Their Own Language", *Harvard Business Review*

³ Common Sense Advisory. 2016.

⁴ Young Holly. 2015, "The digital language divide", *The Guardian*

⁵ Jordan Papolos, 2016. "3 Common Problems of Machine Translation", *CSOFT International*

⁶ Wu, Yonghui, Schuster, Mike, Chen, Zhifeng, V. Le, Quoc, Norouzi, Mohammad. 2016. "Google's Neural Machine Translation System: Bridging the Gap between Human and Machine Translation", *Cornell University*

of the group, they were lacking someone with marketing and business skills. That was when Sofia jumped in to complete the group. (**Exhibit 3** exposes a resume of each founder.)

The five founders realized that there was a gap in the translation industry and that language still represented a major barrier for business, despite the technology evolution and developments. In fact, for companies that interact with their customers on a daily basis, it was very difficult to find an effective and affordable translation service, to communicate with different languages and nationalities in an easy and fast manner. Unbabel's founders believed that a fast, with quality and cheap translation could only be provided through the combination of both Machine Translation and Human Translation

The group had the idea while spending a weekend surfing in Monte Clérigo beach, in Aljezur, Portugal. Vasco Pedro, recalls when they thought at Unbabel in the first place:

*"The moment that we actually decided to start Unbabel was during a surf trip. We had started surfing together in our previous company and we continuously sucked at it but it was fun, and so we decided to keep doing it. One of the weekends, was the weekend that we sat down and said: Hey guys, are we actually doing this or not?"*⁷

The team had this conversation due to dialogues with friends and family that had houses to rent on Airbnb. These people were finding difficult to communicate and arrange the details of the rental with guests that were neither English nor French. For instance, with German guests, they used Google Translate, but were not comfortable with it and thus, they were constantly afraid of misunderstanding the conversation and lose the opportunity to rent the house.

Unbabel was officially founded in August 2013. In October 13, Unbabel launched a prototype to the community.

Understand and be Understood

Vasco Pedro, along with his team, came up with a solution. Unbabel combined Machine Translation with a community of bilinguals and freelance translators, resulting in scalable and high quality human translations. The translation provided by Unbabel could be less costly and faster than Human translation and, at the same time, more trustworthy, personalized and with more quality than Machine Translation itself. Vasco Pedro, remembers why it was so important to combine human and machine translation:

*"It seems kind of silly that in the 21st Century we still do not have a computer that is able to translate. We realized that they are close but they are not quite there yet. If we just get human to help the machine complete the translation, we could make the human so much more productive and produce things that are human quality and sound natural, not robotic, and do not have mistakes. Typically, the industry works in a way that the human does 100% of the work. We use artificial intelligence to do 95% of the work, and then the human does the remaining 5% of the work. And since the human does 5% of the work, the costs go down significantly."*⁸

The objective of this company was to support enterprises and organizations that wanted to grow internationally. Unbabel had the potential to support these companies in a diverse range of levels. For instance, in case of customer support, Unbabel's translation service would allow companies to hire and recruit agents based on their quality and experience and not based on the number of languages they spoke. Thus, these agents would be able to "speak" a high number of languages and provide support to a higher number of clients. These would increase customer satisfaction significantly, as the service would be more personalized.

⁷ Pedro, Vasco. 2016. "Portugal's first YC-backed up startup, Unbabel". *The Global Startup Movement*

⁸ Pedro, Vasco. 2014. "Success Story of Vasco Pedro- Unbabel". *Young Innovation*

In March 2014, almost a year after being founded, Unbabel covered 14 different languages. These languages were organized in language pairs, in order to ensure direct translation from one language to another. Language pairs consist of a source and a target language therefore, they have one single direction. This implies that, for instance, Portuguese to English is not the same language pair than English to Portuguese. On August 2014, Unbabel launched mobile apps for editors, on Apple IOS and Google Android.

The secret of Unbabel's business model was the possibility of doing an API Integration in diverse platforms. Vasco and his team wanted to integrate their software in channels such as, Zendesk, Mailchimp, Github, Sendgrid, Evernote and Salesforce. These channels represented a huge opportunity for Unbabel to grow and the integration would be done through Unbabel's API.⁹ For instance, in the case of Zendesk, an integration built on Unbabel's API would mean that Zendesk users could use Unbabel's service without leaving their Zendesk platform. This would make the process much more seamless and faster. The dimension of these channels would represent a huge increase in the number of translated words, and an exponential growth in revenues.

The efforts were canalized in this direction and, on August 2014, Unbabel for Zendesk with integration built on the company's API was launched. As the API and Machine Learning processes were being optimized to ensure improvements in the scalability of the product without losing both quality and speed, Unbabel created the world's first subscription service for translation on July 2015. The subscription service would allow to maintain a constant flow on the number of words to be translated in the platform and, at the same time, would help to ensure clients' engagement and to monitor the cash flows of the company. With this, the monthly revenue began to be measured in terms of Monthly Recurring Revenue (MRR).¹⁰ Moreover, there were 4 pricing levels depending on the number of words translated (**Exhibit 4** exposes the different packages offered by Unbabel).

One month later, Unbabel was providing translation services in 22 languages that were organized in 45 different language pairs.

Almost one year later, on March 2016, Skyscanner¹¹ and Oculus VR¹², two multinational companies, joined Unbabel as subscription customers. The number of languages covered continued to increase, reaching 24 on October 2016.

Unbabel's translation pipeline had a major role in the quality and speed of the translation. (**Exhibit 5** explains the translation process).

As an important part of the company's business model, the human editors were carefully selected. Firstly, they were given at least 20 tasks to complete and then scored by language experts. The score achieved determined the editor's hourly rate (ranged from 8 to \$20) and which customer tasks they would have access to. Editors were also evaluated periodically to ensure improvements and experience gains.

⁹ In a simplified manner, API, which stands for Application Program Interface, is a set of programming instructions and standards for accessing a Web-based software application.

¹⁰ MRR, acronym for Monthly Recurring Revenue, is a common metrics used by SaaS or B2B subscription businesses. It is used when there are agreements with a defined contract length. It is also possible to measure revenue in terms of Annual Recurring Revenue (ARR=12xMRR).

¹¹ Launched in 2005, Skyscanner is a travel search website headquartered in Scotland with offices with several countries.

¹² Oculus VR is an American technology company founded in 2012. It specialized in virtual reality hardware and software products.

The process was designed to be fast and scalable. Due to machine learning processes, as the number of clients increased, so did the quality of the model. For Pinterest¹³, all the international tickets were being answered by a team of 5 in-house agents that used Unbabel for Zendesk. With 25 different target languages, Unbabel's software allowed this company to hire customer support agents by their experience instead of their translation skills.

When compared to its competitors, Unbabel was providing a more affordable service. Since Unbabel's editors were 5x faster than the average Human Translator, the price charged could be much lower than its competition. In fact, depending on the contract and its characteristics, Unbabel charged its clients from \$0.03 a word, compared to the average human translation fees of \$0.13.¹⁴

The need for funding

As in most of start-ups, raising capital can be a difficult and cumbersome process, and Unbabel is no exception. Vasco Pedro, and his colleagues wanted to attack this untapped market but this was not possible without funding. In the beginning, for the first six months, the five founders invested everything they had in company and were basically receiving no return. Along with the founding team, André Silva joined Unbabel as Full-stack developer. As their product was becoming more accepted and widely spread in the community, a round of investment was clearly needed.

The team decided to start approaching some investors, with the objective of getting a seed round. When they were about to sign a term-sheet for this investment, Unbabel was accepted in Y-Combinator. In the end of 2013, Vasco and his co-founders, were extremely amazed to have created the first Portuguese start-up to be accepted in this well renowned accelerator.

Y-Combinator is a prestigious accelerator with a strong track record, based on Silicon Valley, California. This three-month intensive program culminates in the Demo Day, in which founders have 2.5 minutes to present their company to invitees and investors. After this, on Investor Day, there are one-on-one meetings between companies in the batch and investors. YC makes small investments in return for small stakes in the companies that are accepted in its programs.

In case of Unbabel, Y-Combinator invested \$22,000, for 7% of the Unbabel's equity. This implied the issuance of 600,000 shares.

Similarly to YC, Faber Ventures, along with Shilling Capital Partners, invested at Unbabel in December 2013. The total capital raised amounted to \$140,000, and implied the issuance of 1.05 million shares distributed 50% for each of the two investors, respectively.

With these new investors, the landscape of the company's common equity changed a little. (**Exhibit 6** shows the Capitalization table of Unbabel up to these investments).

Y-Combinator was a valuable and intense experience for the team:

*"YC is about hard work: no silver bullets or shortcuts. For three months, you focus on the business, build customers or product. We rented an apartment with two bedrooms, four of us in one room, Sofia in another, and the living room was the office. You wake up and spend 16 hours working until you are about to sleep, all together, all the time, for three months."*¹⁵

By the time of the Demo day in Y-Combinator, Unbabel already had 4,400 human editors working across the world and some early adopters, such as, *Pinterest*, *Ebay*, *Yummly* and *Verbling*. Additionally, the number of editors was growing 13% per week and registered 12-week growth

¹³ Founded in 2010, Pinterest is a web and mobile application that operates a software that allows to discover and browse information, mainly images and video.

¹⁴ Faber Ventures, 2015. "Unbabel: How Human + AI = A Winning Combination"

¹⁵ Pedro, Vasco. 2016. "Interview with Vasco Pedro". *Startup Guide Lisbon*

of 40% in the number of translated words. Unbabel's low price and its quality characteristics made this product unique.

Seed rounds of financing

First Round of Financing

After the Demo Day, the company's prospects and product were attracting many investors and, on July 2014, Unbabel raised \$2.0 million in seed financing. This round involved 18 different investors. The investment was in form of a SAFE note with a valuation cap of \$6.5 million¹⁶. The lead investors in this round were Matrix Partners, Google Ventures, Caixa Capital and IDG Technological Venture Capital. Faber Ventures and Shilling Capital Partners decided to re-invest in Unbabel, acquiring the same right as the previous mentioned investors.

Typically, seed financing is provided for market research, product development or other early-stage operations. In order to attract more clients and expand its customer base Unbabel needed capital. In this case, the capital raised would be mostly applied in R&D, the expansion of the company's engineering and marketing teams. With 150 customers and 8,000 registered editors in the website, Unbabel was already gaining its presence in the market.

Second Round of Financing

Unbabel's team, composed of 14 employees at the end of 2014, continued to develop the product and approaching clients. By February 2015, Unbabel had already 300 customers and the number of translated words was approximately, 15 million since the company was founded.

In May 2015, the company raised more seed capital from Structure X Capital, Funders Club and Caixa Capital. Similar to one of the previous financing rounds, the capital raised amounted to \$2.0 Million. In this case it was used a SAFE note with a valuation cap equal to \$14 million.

This seed round of financing was deeply valuable to the company, as 2 months later, in July, the company registered the highest level of revenue since it was established: \$100,000. Unbabel kept growing and more editors were needed with an increasing customer base. By the end of 2015, Unbabel had 32,000 editors.

In fact, the translators represented the highest cost of revenue the company had. This cost represented roughly 50% of the MRR. Nonetheless, this percentage was low when compared to one of Unbabel's main competitors, Lionbridge, in which operating costs directly related to translation were, on average, 68% of total revenue.¹⁷

Third Round of Financing

After achieving its record value in revenues, the MRR was kept constant around that value. In February 2016, the number of employees had increased to 26. As the number of employees was growing, so were investment needs.

In the meantime, by May 2016, another 2 Investors, Neodymium and Newsletter Innovations believed in Unbabel's success. Each invested \$140,000 and \$110,000, respectively, in exchange for a SAFE note with a discount rate equal to 80%.

¹⁶ The Valuation Cap of a SAFE note defines the maximum valuation that can be applied to convert the investment amount into equity in case there is a subsequent round of financing.

¹⁷ Lionbridge Annual Report. 2015. pp 34.

Due to the low amount of capital raised in this round, there was the suggestion that another one would be needed in the following months. (**Exhibit 7** summarizes the information of the three rounds of seed financing.)

Series A round of financing

In the end of 2016, Unbabel intended to expand its team internationally and grow exponentially. At this point, the company was already supporting several languages with different API integrations. However, Unbabel's team felt that they could develop more products, but were lacking funds to invest in research and new talent.

The company was not profitable yet, and up to October 2016, the average gross margin was 20%. Vasco Pedro and his team believed the break-even would be within a year. Since the beginning of 2016, Unbabel's revenues were fluctuating. Month on month growth varied from increases of 50% or more to decreases of 30%. In October, revenues grew by 90%, however, the financial situation of the company in this date, suggested that extra funding would accelerate the company's growth to a more mature stage. Vasco Pedro, without any compromise, started to search for funding. The "dating process" with investors can be very difficult. Besides being difficult to find the capital needed, the terms associated with the investment have to be extremely balanced for both entrepreneurs and investors.

After a set of back-and-forth episodes and a lot of effort to close deals with clients to positively signal investors, Vasco Pedro and his team managed to get a proposal for a Series A. In October 2016, Unbabel received an investment proposal lead by Notion Capital and Caixa Capital (**Exhibit 8**). Faber Ventures and Shilling Capital Partners, investors in previous rounds of Unbabel, were intending to participate in this investment with a lower amount than the lead investors. The amount offered was \$6.0 million in convertible preferred stock at \$0.95 per share. Embedded in the term sheet of this investment (**Exhibit 9**), there was also a certain percentage of the company reserved for employees and senior management team in form of stock option pools (ESOP and SMT, respectively). For the founding team, as they were senior management team members, the two option pools were beneficial.

Despite the funds expertise in this industry, Vasco Pedro considered some of this investment's terms somehow harmful for the company's future, namely the anti-dilution that Series A investors would benefit. This was not the only problem that Vasco highlighted in this proposal. The fact that the issuance of preferred stock implied the possibility of previous investors to convert their SAFE notes, would increase by a considerably high proportion the founder's dilution.

The valuation implied in the investment was in line with the industry benchmarks for SaaS companies (**Exhibit 10**). Besides believing that this investment could be valuable for the company, Vasco Pedro was reluctant to the amount of capital that was being offered, due to the company's short-term cash needs and expenses distribution. For the biggest part, the money was spent on operating expenses. The office rent and payroll expenses amounted to \$250,000 per month. Also, a total amount of \$80,000 was used to support Marketing and web services expenses, as well as, legal fees, lawyers, accountants and meetings around the world. Besides this, Unbabel was spending \$30,000 per month just to pay their community of translators.

With a new investment, Unbabel would be able to invest in R&D and human capital, specially to develop marketing and sales teams, which would increase those expenses by a high proportion. Also, assuming that the company would continue to grow and to retain more clients, there would be more tasks to translate and more money to cover editor's expenses would be needed. Considering this landscape, Vasco Pedro was worried that the \$6.0 million proposed by the investors would not avoid other financing round in the next year.

The decision

Vasco Pedro and his team were struggling with the terms presented for a potential Series A. Unbabel needed funds to invest in human capital to develop new products and improve the current ones. Considering that this was essential to ensure the company's mission delivery, all the team was a little biased towards the investment. However, and disregarding his emotional attachment to the company, Vasco Pedro knew that Unbabel's runaway was a few months from October 2016, namely near March 2017, so he was wondering if this investment was really needed in that time. However, he knew that rejecting the offer could be a very risky option, due to the uncertainty of Venture Capital environment.

With this in his mind, Vasco Pedro would carefully examine the details of the proposed investment to understand the dilutive effects of future financing and if employees' benefits were properly aligned. The key terms he had planned to center his analysis on were the liquidation preference, board representation and composition, stock option pools, anti-dilution and pre-emption rights. Vasco Pedro expressed his concerns to his co-founding and management colleagues and the analysis of the purposed investment became. Suddenly, with the term-sheet for this Series A investment in the table in front of them, Vasco became certain of his decision and Unbabel's future became brighter.

Additional Readings

Wakentin, Tristram. 2014. "What is software as a service (SaaS)?", IBM

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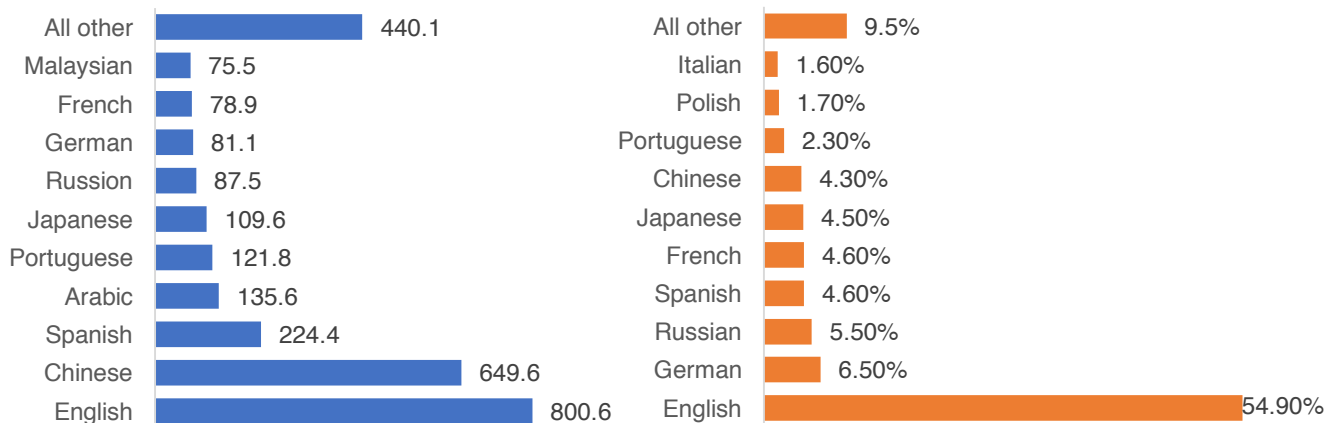
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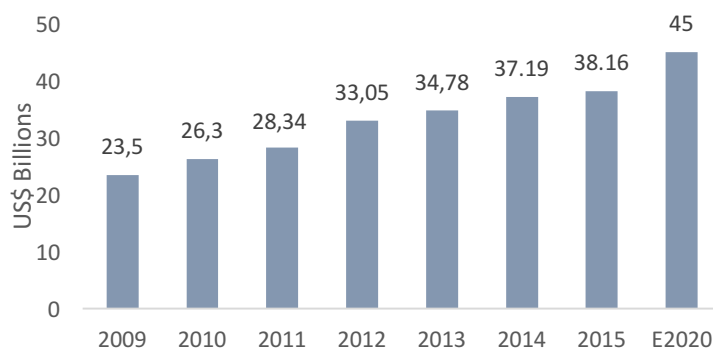
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Exhibit 1 Top 10 languages used on the internet in million users and percentage of the availability of different languages in websites (as of 2013), respectively.



Source: The Guardian and W3techs

Exhibit 2- Language Service Market Size 2009-E2020



Source: Statista

Exhibit 3 Founders CVs

Vasco Pedro

- 1999-** Graduated in Language and Knowledge Engineering- University of Lisbon, Lisbon, Portugal
- 2001-** Research Assistant- Carnegie Mellon University, Pittsburgh, USA
- 2003-** Master of Science in Language Technologies- Carnegie Mellon University, School of Computer Science, Language Technologies Institute, Pittsburgh, USA
- 2007-** Engineering Intern at Google, Mountain View, USA
- 2009-** PhD in Language Technologies- Carnegie Mellon University, School of Computer Science, Language Technologies Institute, Pittsburgh, USA
- Co-founded Bueda Inc.

- 2010-** Portuguese Foundation for Science and Technology (FCT) award for his Ph.D. Scholarship
- 2011-** Research Faculty- IST, Lisbon, Portugal
Co-founded Flashgroup, Inc
- 2012-** Co-founded Dezine Inc.
- 2013-** Co-founded Unbabel Inc.

João Graça

- 2002-** Graduated in Information Systems and Computer Engineering- IST, Lisbon, Portugal
Software Engineer- SISCOG, Lisbon, Portugal
- 2003-** Teaching Assistant- IST, Lisbon, Portugal
- 2006-** M.S. Information Systems and Computer Engineering- IST, Lisbon, Portugal
- 2010-** PhD in Natural Language Processing and Machine Learning - IST, Lisbon, Portugal and University of Pennsylvania, USA
Portuguese Foundation for Science and Technology (FCT) award for his PhD Scholarship
- 2011-** Research Scientist- Flashgroup, Pittsburgh , USA
Marie Curie, Welcome II program award
Co-founded and Lisbon Machine Learning Schools
- 2012-** Chief Scientist- Dezine Inc,
- 2013-** Co-founded Unbabel
- 2015-** Organizer of the Conference on Empirical Methods for Natural Language Processing
Invited Professor- Porto Business School, Porto, Portugal

Hugo Silva

- 2011-** Information Systems Technical Certification
Intern at Ciben
Full Stack Engineer at Bomsite
- 2012-** Full Stack Engineer at StreetDog Inc
- 2013-** Co-founded Unbabel

Bruno Silva

- 2001** Graduated in Communication Design- IADE, Lisbon, Portugal
3D Art Director at Lucidcartes
Art Director at JWT
- 2006-** Art Director at Youmix
- 2009-** Freelance Designer at Ditongo
- 2012-** Product Designer at Dezine Inc
- 2013-** Co-founded Unbabel

Sofia Pessanha

- 2002-** Graduated in Business Administration- Universidade Nova de Lisboa, Lisbon
Summer Intern at Unilever- Lisbon, Portugal
Marketing Assistant at Sonae Sierra- Madrid, Spain
- 2006-** Channel Manager at TIMWE- Lisbon, Portugal
- 2007-** International Business Developer at TIMWE- USA, Mexico, Colombia, Brazil,

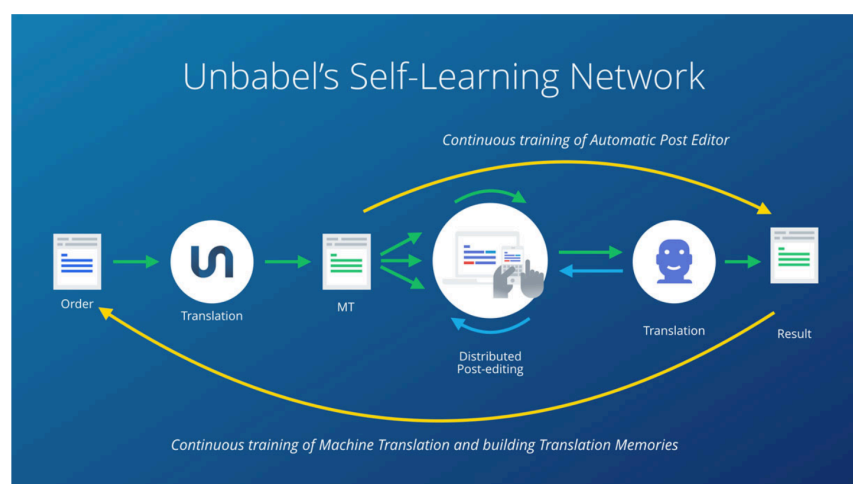
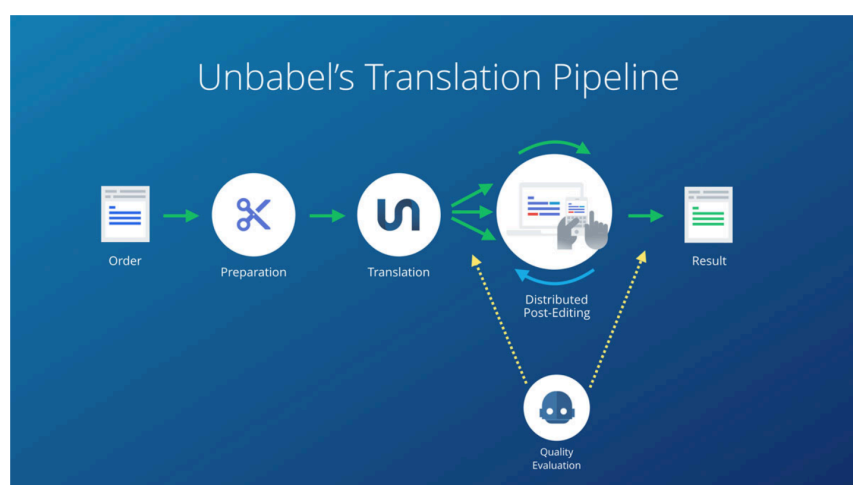
- 2008-** Product Marketing Manager at TIMWE- Lisbon, Portugal
- 2010-** Co-founded Beta-I – Lisbon, Portugal
- 2011-** Co-founded ActualSun- London, UK & Houston, USA
- 2012-** Director at The Founder Institute- Lisbon, Portugal
- 2013-** Co-founded Unbabel

Exhibit 4- Unbabel's subscription services

TYPE	PRICE PER MONTH	N° WORDS INCLUDED
BASIC	\$110	2,000
PROFESSIONAL	\$450	9,000
ENTERPRISE	\$900	20,000
CUSTOM	Depends on the contract- from \$0.03 per word	>20,000

Source: Business Wire

Exhibit 5- Unbabel's translation pipeline



1. **Order:** When the order (task to be translated) is placed, it will have a custom flow on the pipeline. This process is made by content types (emails, chat, subtitles, product description, etc.) but the overall progression for text is similar.
2. **Preparation:** The next step is the preparation of the order, depending on the customer the text comes from. When a customer subscribes the Unbabel's service, custom glossaries and style guides are automatically tagged to orders. During this phase, the source of the language is analyzed, allowing the detection of hard-to-translate elements such as, names and addresses. With this, it is estimated the overall difficulty of the text. Additionally, as the preparation is made on a per customer basis it allows to replicate brand terms and tone of voice in multiple languages.
3. **(Adapted) Machine Translation:** Firstly, Unbabel's machine translation checks its own memory. This ensures that if a full sentence has already been translated for the same client or domain, it is retrieved and reused. Although it is subject to Human Translation in a latter phase, this allows to increase speed and ensures quality and consistency. The text follows to the MT Router, that chooses the best specialized MT engine, based on the content, domain and customer. After being translated by machine only, the text goes to the Automatic Post-Editor where occurs an automatic translation improvement, according to the previous tasks done by the Unbabel's human network. The new version that is created is used for quality evaluation and distributed to Unbabel's community of editors.
4. **Editor Selection:** Unbabel has a global community of 50,000 people responsible for the review process of the machine translated text. The main criteria for editors' selection is the availability, how highly rated they are for each type of content and how urgent the task is.
5. **Smartcheck:** Once the editor has been chosen, Unbabel's smartcheck helps doing the task faster. It checks a range of potential errors with helpful suggestions, including tone, spelling, tone and lexical consistency. The smartcheck can be personalized according to customer's requirements.
6. **Result:** Finally, the order is correctly translated and ready to be delivered to the customer.
7. **Self-Learning Network:** The more Unbabel translates, the stronger the system becomes and better the outputs it generates. Machine Translation engines are retrained, its memory is enlarged and the automatic post editing improves with more tasks.

Source: Unbabel's blog

Exhibit 6- Capitalization table as of December 2013

	Founding Team		YC+ Faber Ventures + Shilling Capital Partners	
	# shares	(%)	# shares	(%)
Initial Number of Shares	6 810 000		6 810 000	
Vasco Calais Pedro	1 800 000	26,43%	1 800 000	21,18%
Joao Varelas Graca	1 800 000	26,43%	1 800 000	21,18%
Bruno Prezado da Silva	800 000	11,75%	820 000	9,65%
Hugo Vieira da Silva	800 000	11,75%	820 000	9,65%
Sofia de Mello Pessanha	1 100 000	16,15%	1 100 000	12,94%
André Silva	510 000	7,49%	510 000	6,00%
Y-Combinator			600 000	7,06%
Faber Investments			525 000	6,18%
Shilling Capital			525 000	6,18%
Final Number of Shares	6 810 000		8 500 000	

Exhibit 7- Seed Rounds of financing-Summary

Note Holder	Round of financing	Conversion CAP	Discount Rate	Initial Principal	Issuance Date
Caffeinated Capital	2nd Seed Round	14 000 000	100%	\$168 660	May-15
Matrix Partners X, L.P.	2nd Seed Round	14 000 000	100%	\$159 114	May-15
Structure X Capital, LP	2nd Seed Round	14 000 000	100%	\$674 639	May-15
Individual Investor A	2nd Seed Round	14 000 000	100%	\$16 866	May-15
Individual Investor X	2nd Seed Round	14 000 000	100%	\$42 165	May-15
Individual Investor Y	2nd Seed Round	14 000 000	100%	\$25 299	May-15
Individual Investor W	2nd Seed Round	14 000 000	100%	\$16 866	May-15
Individual Investor Z	2nd Seed Round	14 000 000	100%	\$9 546	May-15
Fundersclub B52 LLC	2nd Seed Round	14 000 000	100%	\$323 762	May-15
Workday Inc.	2nd Seed Round	14 000 000	100%	\$168 660	May-15
Faber Investments SGPS	2nd Seed Round	14 000 000	100%	\$183 600	May-15
Caixa Capital	2nd Seed Round	14 000 000	100%	\$210 825	May-15
Others- 1st seed round	1st Seed Round	6 500 000	100%	\$278 297	Jul-14
DG Incubation, Inc	1st Seed Round	6 500 000	100%	\$116 956	Jul-14
Matrix Partners X, L.P.	1st Seed Round	6 500 000	100%	\$275 841	Jul-14
IDG Technology Venture Investment V, L.P.	1st Seed Round	6 500 000	100%	\$233 912	Jul-14
zPark Venture, L.P.	1st Seed Round	6 500 000	100%	\$116 956	Jul-14
Caffeinated Capital	1st Seed Round	6 500 000	100%	\$175 434	Jul-14
Caixa Capital	1st Seed Round	6 500 000	100%	\$233 912	Jul-14
Shilling Capital Partners	1st Seed Round	6 500 000	100%	\$92 263	Jul-14
Faber Ventures	1st Seed Round	6 500 000	100%	\$148 952	Jul-14
YCVC W14, LLC	1st Seed Round	6 500 000	100%	\$93 565	Jul-14
Google Ventures 2014, L.P.	1st Seed Round	6 500 000	100%	\$233 912	Jul-14
Neodymium, LLC	3rd Seed Round	0	80%	\$140 000,0	May-16
Newsletter Innovations Ltd	3rd Seed Round	0	80%	\$110 000,0	May-16

Note: "Others-1st Seed Round" includes 8 different investors.

Exhibit 8- Series A investors' description**Notion Capital**

Founded in 2009, Notion Capital is a Venture Capital firm based in London, England. It was founded by Chris Tottman, Ian Melbourne, Los White and Stephen Chandler. This firm's portfolio is concentrated in early stage B2B and SaaS Business. It is highly experienced in the Cloud Computing market and, up to 2016, had lead 18 investments in companies of this industry. In 2009 and 2012, Notion has raised two different funds that amount to, \$30 and \$120 million.

Caixa Capital

Caixa Capital is a Private Equity and Venture Capital company of Portugal's largest banking group (Caixa Geral de Depósitos) with both Private Equity and Venture Capital teams. Caixa Capital is focused on support the global expansion of Portugal related teams and companies. The Venture Capital division is focused on seed and start-up investments, to help the companies in value creation. Since it was founded in 2009 until 2016, it has made 30 investments.

Faber Ventures

Founded in 2012 by Alexandre Barbosa and based in Lisbon, Faber Ventures is mainly focused in B2B, and deep-tech and software platforms. Investments range from pre to post seed. It has recorded 19 investments.

Shilling Capital Partners

Shilling Capital Partners was founded in 2011. Since that date, Shilling has been one of the most active Business Angel funds in Portugal. This firm invests a wide range of sectors, including retail, banking and telecommunications.

Source: Crunchbase and companies' website

Exhibit 9- Notion Capital's Term Sheet**Term Sheet- Investment in Unbabel Inc**

October 2016

This term sheet summarises the principal terms of the purposed Series A Preference Share financing of Unbabel Inc. (the "Company") by Notion Capital ("Notion") and Others in the company. The investment is subject to the completion of due diligence (including legal, technology and business diligence).

Convertible Preference Shares	<p>Notion Capital, together with certain other investors (together with Notion, the "Investors") will invest a total amount of \$6,000,000. Notion will invest \$3,400,000 and Others the remaining value: Caixa Capital will invest \$1,925,000, Faber Ventures \$564,000 and Shilling Capital Partners \$110,000.</p> <p>The investment will be made in the form of Convertible Preferred Shares ("CPS").</p>
Price/Valuation	The share price of these shares will be \$0.95.
Exit Provisions	<p>The CPS shares will rank senior to the existing share classes in case of liquidation, dissolution or sale of the company. CPS holders will be entitled to receive the original purchase price up plus any declared and unpaid dividends. After the payment of the Liquidation Preference to CPS holders, the remaining assets should be distributed on a pro rata basis to both CPS and Common holders (on an as if-converted basis). However, this will fall away if Investors would receive greater proceeds than 3x their investment by converting to Common Stock and participating with other Common Stock holders on a pro rata basis. CPS shares will have customary non-cumulative participating dividends.</p> <p>Additionally, if there has been no exit by the 6th anniversary of the Investment, the Investors have the right to appoint corporate finance advisors to guide on exit</p>

	opportunities, considering that the Company will not be obligated to consummate an exit.
Stock Option Pool	<p>The existing shareholders will agree to authorise an additional pool of employee stock options, amounting to 1,300,000 shares. Also, 2,000,000 shares will be attributed to an SMT ESOP that will awarded to senior management team members. All employee options, including SMT ESOP will have the following vesting schedule:</p> <p>25% after one year</p> <p>75% will vest monthly over the next 36 months.</p>
Pre-emption Rights	Investors will have standard pre-emption rights to the issuance of new shares in the Company (excluding any employee incentive scheme), based on their pro-rata ownership of the Company. Therefore, Investors will have the right (not the obligation) to subscribe shares not taken by other shareholders in similar proportions to those represented by their existing shareholdings.
Right of First Refusal	Investors will have a pro rata right, but not the obligation, to participate on identical terms in transfers of any shares of the Company, and a right of first refusal on such transfers. This right is based on the ownership of Series A CPS.
Anti-Dilution Protection	CPS shares will have a weighted average anti-dilution protection in case the Company issues additional equity securities at a lower subscription price than the one paid by the Investors for the CPS shares. For any issuance at a higher price than the current conversion price, no adjustment shall be made.
Drag&Tag Provisions:	<p>In the event of an offer to purchase 100% of the Company's issued shares which has been approved by (A) the investor Majority, (b) the Founders and (c) the Board, the Company's other shareholders will be obligated to offer their shares to the purchaser at the same price per share and on the same terms accepted by the other shareholders.</p> <p>Where there is a change in control, tag-along will apply to all shareholders.</p>
Founder Leaver Provisions	50% of each Founder's, which include Vasco Pedro, João Graça, Bruno Silva Hugo Silva and Sofia Pessanha, shares will be subject to a repurchase option in favour of the company.
Information& Registration Rights	Investors will have the rights to standard financial information and registration rights.
Board of Directors	<p>The Board shall consist of a maximum of 5 directors. Notion will have the right to appoint one Director to the Board. In addition, Notion will have the continuing right to appoint an observer to all Board meetings. All reasonable expenses associated with this will be paid by the company according with its standard travel reimbursement policy. All significant stockholders will be supposed to agree with the composition of the Board, in which a suggestion would be as follows:</p> <p>3 representatives designated by the Founders, who are then actively providing services to the Company as an employee or officer</p> <p>1 representative designated by Notion</p> <p>1 representative designated by Investors, of which shall include Notion</p> <p>If a Founder ceases to own 3% of the fully diluted shares of the Company and leaves the Company, one Founder Board seat shall be designated by a majority of the Board unless otherwise agreed by the Board and Notion.</p>
Voting Rights	Investors will have the right to a certain number of votes equal to the number of common shares issuable upon conversion of its CPS.
Fees	The Company will cover both fees incurred by the Investors in connection with the proposed investment as well as all reasonably incurred future fees related to legal advice required by Investors.

Exhibit 10- SaaS funding benchmarks- 2016

	Pre-Seed	Seed	Series A
Amount	\$200-\$500K	\$500K-\$2.5M	\$3-\$12M
Valuation	\$1-\$3M	\$2-\$6M	\$10-\$40M
Investors	Friends&Family, Angels	Angels, Micro VCs	VCs
Team	Smart, committed guys/girls with relevant expertise/skills	Founder/Market Fit	No "star" VPs yet; Often good director-level hires; Proven ability to attract & manage great people
Product Market Fit	Market research indicates strong need for the product	Strong indications of Product/Market Fit from early customers or pilot users	Clear Product/Market Fit and increasing evidence of Product/Market Fit in larger markets
Tech	Strong tech co-founder with relevant experience	Proven ability to move fast & break thins (with emphasis on moving fast) Starting to think about scalability and to put in place processes	Proven ability to attract and manage great engineers; Product Scales, but still breaks one in a while; Continued high product development velocity
MRR	-	~\$0-\$50K	~\$100-\$250K
Traction	-	If pre-monetization: Growing waiting list, trial user base or pipeline Otherwise: adding a few \$K in MRR per month	Got from \$0 to \$100K MRR with in 12-18M Growing >3x y/y; Account expansions, Increasing Average Revenue per Account
Sales&Marketing	Understanding of best practices; good ideas	Strong indication of demand (E.g. organic trial start-ups)	Strong organic demand. Success with at least one (not necessarily scalable) customer acquisition channel Decent understanding of funnel and pipeline conversion rates
Defensibility	-	Tech, product development velocity	First signs of an emerging "Mini Brand"
Market Potential	Belief in \$10M+ ARR potential	Conviction that there is \$100M+ ARR potential	Increasing evidence of \$300M+ ARR potential Increasing confidence in exit potential (large strategic buyers or IPO)

Source: Christoph Janz, Point Nine Capital- The Angel VC blog.

Unbabel Inc.

Series A: Accept or Delay?

-Teaching Note

Summary of the case

Unbabel, a start-up backed-up by Y-Combinator, was founded in August 2013 by a group of five Portuguese friends. Unbabel's product, a translation service that combines both Human and Machine Learning, had been proved to be scalable and was successfully adopted by its wide range of customers. After three rounds of seed financing and several product and integration developments, Unbabel received a proposal for a Series A of \$6 million, led by Notion Capital and Caixa Capital.

The case is focused on the entrepreneur and CEO of Unbabel, Vasco Pedro, who is reluctant to accept the proposal made by the aforementioned investors. The deal implied the issuance of Convertible Preferred Stock at \$0.95 per share, which could have implications for both Unbabel's founders and its earlier investors. Therefore, the case is designed to the analysis and comparison of the different terms presented in the term-sheet for this particular Series A investment. Essentially, it is important to understand the dilutive effects it might have and, at the same time, the consequences in case there is a subsequent round of financing.

In order to access whether the investment decision should be accepted or delayed, it is important to compute the capitalization table in case the proposal is accepted, and compare the different anti-dilution and liquidation preference hypothesis to determine its impact on future financing decisions and returns in case of an exit.

The case is planned for courses in Entrepreneurial Finance, Venture Capital or Applied Corporate Finance.

Possible Poll Questions

1. Why was Unbabel a different and possibly successful idea? Was the market attractive and with promising growth? How do you evaluate Unbabel as a strategic investment opportunity?
2. Analyze the SAFE notes used in three rounds of financings, exposing both the advantages and disadvantages of this form of investment for both investors and entrepreneurs.

3. Consider the term sheet of the Series A round presented by Notion Capital. Does it favor the entrepreneur or the Investors? Support your answer with specific terms from the Term Sheet presented in the case.
4. Compute and analyze the capitalization table after the Series A investment, in case it is accepted and assuming that all SAFE holders convert their notes. What was the post-money valuation in this round?
5. What would be the implications to Series A investors if they have a participating versus conventional liquidation preference and Unbabel is sold by \$40 million in two years?
6. And in case there is a Series B financing round of \$30 million after the Series A at a share price equal to \$2? And equal to \$0.5? Is your answer similar in case Series A investors have a full ratchet anti-dilution protection?
7. **If you were Vasco, would you accept Notion's offer as proposed, attempt to negotiate some terms or reject it? If you decide to negotiate, what modifications would you try to make?**

Suggested Answers

1. **Why was Unbabel a different and possibly successful idea? Was the market attractive and with promising growth? How do you evaluate Unbabel as a strategic investment opportunity?**

The assessment of a new venture must be based on different key areas. Overall, Unbabel's product can be considered strong and innovative with a perfect fit in the language service market. Both this aspect, as well as the company's founders and market prospects, contribute to enhance and improve the company's strategic attractiveness to investors and clients.

It is important to realize and understand that a brilliant and unique idea is not everything when creating a start-up. The start-up environment is highly competitive and is continuously changing, so the survival companies in this industry must outperform their competitors while adapting their business models to new trends.

Firstly, when analysing the opportunity inherent to a start-up, one should focus on the product, the market and the business model. Unbabel's product was a translation service that combined both Machine and Human translation, with a 95 to 5% distribution, respectively. This powerful combination allowed the company to offer a faster, more affordable, with more quality and highly scalable product when compared to its competitors. Also, the particular manner in which Unbabel's translation pipeline was designed, with a continuous Machine learning, made this product hard to replicate.

When considering the market, besides being well-developed, it was suggesting a need of change. By 2013 there were only two options for translation: Machine Translation, which lacked the quality needed by corporations and, Human Translation, which was very expensive and not scalable. According to the **Exhibit 2** of the case, the language service market amounted to \$34.8 billion in 2013 and was expected to grow up to \$45 billion in 2020, suggesting a considerably high growth throughout the period. More importantly than being a fit to the market, Unbabel's translation service had the capacity of solving one of the issues that existed in this market: the lack of an affordable, scalable and with high quality translating service.

Additionally, there was also centralization towards some languages on the internet. As it is possible to see in **Exhibit 1** of the case, most of the world's web sites were only available in English. Although English had the highest number of users in the internet, Chinese was not far

below. However, there was huge gap in the availability of websites in languages other than English, since German was the second language in the ranking with only 6.5% of the world's websites. Moreover, as it is exposed in the case, there was a strong connection between the language and the e-commerce volumes. Expectedly, most of consumers preferred to buy items on websites in their native language, placing this prior to the price of the item. Adding this to the high portion of the market that remained untapped (other things to translate than traditional media), there was room for a company like Unbabel to grow in this market.

Unbabel's business model was constructed to ensure the scalability of its product, maintaining the quality searched by enterprises. The fact that the service could be built on the company's API was a key factor to its growth and acceptance by its customers. Furthermore, the different subscription options were very important to ensure the customer's perfect fit with Unbabel. Finally, the pricing and payment to Unbabel's editors were constructed in such a manner that, the more tasks completed and translated the model improves and learn and, consequently, lower the price charged. At the same time, as an important part of the company's Business Model, Unbabel's editors were ensured to increase their payment when the quality of their translations increased.

When analysing a new venture, one should also deeply consider the Founders team and its inherent characteristics. The team is determinant for investors, as they will be responsible for the capital invested. In the particular case, it is possible to conclude that the team was highly diversified, with profound knowledge in the industry. Vasco Pedro had the experience to found other companies and had a PhD in Language Technologies. João Graça also had a PhD in Natural Language Processing and Machine Learning, which enriched the team. Both Hugo Silva and Bruno Silva, completed the team with their skills in programming and design. It is clear that this team was lacking an expert in management and business, so Sofia Pessanha's role was very important. Besides the diversity of the team, the fact that almost all of them had worked together previously is an indicator of how well they work together and go along with each other, which was a very important and positive sign to investors.

Finally, regarding the context, it is possible to point out that the Portugal was a really small country regarding Venture Capital and start-up investments. However, some members of the team had international experience, which could be valuable when moving the company to another country.

The macroeconomic context of the country and the lack of investors were negatively influencing the Portuguese start-up market. In Silicon Valley or London, for instance, the funding opportunities and landscape were considerable different. As it is stated in the case, there were not many regulations to entered the market, besides a powerful technology (which was not Unbabel's problem).

2. Analyze the SAFE notes used in three rounds of financings, exposing both the advantages and disadvantages of this form of investment for both investors and entrepreneurs.

SAFE note, or Simple Agreement for Future Equity, is a common form of investment used in the Venture Capital environment, specially in seed financing rounds. The investor introduces cash in the company, buying the right to buy the company's stock at pre-determined conditions.

SAFE notes are commonly compared to debt instruments, as they can be considered alternatives to convertible notes. When compared to debt, this security has both advantages for both the investor and entrepreneur. Firstly, debt has more time-consuming and heavy requirements, such as regulations, interest, maturity dates, subordination agreements. In contrast, SAFE notes are simpler for both parties, since the agreement and negotiation are around the valuation cap or the discount rate. This can save time and effort for both investors and entrepreneurs.

Considering that in a seed round of financing, capital is mostly raised to fund operations in a start-up's early days, founders found these securities very attractive since, unlike in a sale of equity in traditional priced rounds, the company can issue a SAFE quickly and efficiently, avoiding many of the documentations and procedures involved in financing rounds.

For the investors, the valuation cap and/or discount rate associated to the SAFE are determinant. The valuation cap, determines the maximum valuation that can be applied to convert the amount of the equity security into the company's preferred stock. This, in case there is a subsequent round of financing in which the company's preferred stock is sold at a higher pre-money valuation than the valuation cap, the SAFE holder is entitled to a number of shares using the valuation cap. Converted into stockholder, the liquidation preference of this investor will have a liquidation preference that does not exceed the original investment amount (1x preference). This last part is beneficial for founders as the liquidation preference is limited for these investors, increasing the possibility of founder's return in case of a sale or IPO, for instance. At the same time, it can be seen as a disadvantage for investors.

In case the SAFE has a discount rate, the investor is entitled to have a discount on the price per share of the stock of the subsequent round of financing. The value of the discount is determined according to the following formula: $1 - \text{Discount rate}$. This will allow the SAFE holder to purchase a higher number of shares with the same amount of invested capital, since the price is lower.

Additionally, SAFE notes do not have interest nor maturity dates. For the start-up founders, this characteristic gives some flexibility and, the lack of interest diminishes the dilution effect whenever the SAFE is converted. In case of the investor, these are seen as disadvantages. The absence of a maturity date means that the equity note might never be converted and, simultaneously, there is no interest accrual.

In the particular case of Unbabel, the first SAFE note was used in July 2014, by 18 different investors that invested a total of \$2 million in the company. This resulted from YC's Demo Day. In this first seed round, investors used a SAFE note with a valuation cap of \$6.5 million. In the second financing round, by May 2015, the amount of capital raised was the same, and the investors involved in this round issued SAFE notes with a valuation cap of \$14 million. In the last seed round, one year later, the amount of capital raised was only \$250,000 and in form of a SAFE note with a discount rate of 80%.

The evolution of the SAFE notes, namely in the increase of the valuation caps agreed, act as an indicator of the company's good performance and good prospects for the future. If investors agreed in a valuation cap of \$14 million, they were certain that the company would value at least this amount in a pre-money valuation.

3. Consider the term sheet of the Series A round presented by Notion Capital. Does it favor the entrepreneur or the Investors? Support your answer with specific terms from the Term Sheet presented in the case.

Due to the risk associated with the start-up environment, VC investors are extremely cautious when investing in this type of companies. The success rate of these investments is not only defined by the company itself, but also depends on the partnership that is created between investors and entrepreneurs. When there are investors involved in previous rounds of financing it becomes extremely important to balance all the interests, creating the right incentives for all the participant parties.

Considering the case of Unbabel and the conditions of the previous investors, the issuance of preferred stock might imply a severe dilution for the founders. With new investors, and assuming that the ones from the seed rounds of financing would convert their SAFE notes, founders would

definitely be left with a much lower percentage of their company. In case this scenario is verified, the company's day-to-day operations might be affected, as it would damage management's motivation and commitment. Thus, VC investors must be extremely cautious when proposing a deal, in order to ensure the drive of the management team.

In order to further preform the analysis of the terms implied in the deal proposed by Notion Capital, one might divide the reasoning into the following categories: Control Features, Liquidation and Management Incentives. This would help to organize the different implications of each term.

Regarding the control features, and starting with the board structure, it is possible to conclude that this structure mainly favours the founders. The board will be composed by a maximum of 5 directors, in which 3 are designated by the founders and the other 2 by Notion Capital and all the investors, respectively. Founders should feel comfortable with this structure, as their representatives embody the majority of the board and, at the same time, the other board members, namely the one appointed by Notion Capital, will probably be valuable to the board due to the investor's expertise in the industry.

In contrast to the board structure and majority, the VCs benefit from other type of controlling power. Firstly, Series A investors are entitled to voting rights, according to the number of common shares their investment is equivalent if it were converted. Additionally, it is also possible to highlight the right to appoint corporate finance advisors to guide on exit opportunities in case there has been no exit six years after the investor. This protects investors and secures a possible successful exit. Also, in case of a sale, Notion Capital can force the other shareholders to join the acceptance of that sale (drag-along rights). The weighted-average anti-dilution protection, is also an indicator of a control feature, as investor's equity stake is protected in case there is a new round of financing.

The terms related to liquidation can be considered to favour the VCs. In fact, the Convertible Preferred Shares (CPS) will rank senior to the existing share classes of Unbabel. The existent share classes include both common and preferred shares, assuming that the SAFE note holders convert their hybrid securities. This means that, in an event of liquidation, Series A investors are the first to receive their investment back. In addition to the liquidation preference of 1x the original investment (plus any declared and unpaid dividends), investors will have the right receive the remaining assets on an as-if converting basis. This means that investors are entitled of a Participating Convertible Liquidation Preference. The feature described above is very valuable to investors, as it allows to increase their returns. However, it is important to highlight that Series A investors can participate with their equity stake until the payment of 3x the initial investment. From this point onwards, investors are obligated to convert their CPS shares and will participate with the other shareholders on a pro rata basis. This limitation is valuable for founders, as they are the last to receive in the hierarchy.

The analysis of Management incentives is very important, as it is the base for a healthy relationship between this team and investors. In this case, additionally to the employee stock option pool, a percentage of the fully-diluted capitalization of Unbabel will be attributed to an SMT ESOP. This option pool, entirely reserved to senior management members, is positively influencing both sides of the deal. Firstly, for founders, as senior management members, it ensures motivation and, in the long-term, it diminishes the dilution effect caused by the new investors. Secondly, the vesting period associated with these two option pools works as an incentive for employees to stay at the company (for at least 36 months). Therefore, due to the personal relation that investors require when investing in a start-up, the vesting period is considered to be an investor friendly term.

Moreover, there are some other terms that should be analysed to conclude the overall balance of the term sheet purposed. Firstly, and beneficial for founders, Series A investors CPS shares have

non-cumulative dividends. This means that, in case the company decides not to pay dividends for a certain period, the shareholders are not entitled to receive those dividends. Therefore, this term mainly favours the founding team. Additionally, based on the ownership of Series A CPS, investors have a right of first refusal in any transfers of the company. Since they have the right and not an obligation, this term is valuable to investors.

Summing up, there are terms that can hurt the founders, namely the ones related to the liquidation preference, right of first refusal and the conversion of CPS shares, however it is possible to conclude the term sheet as being well balanced between investors and founders.

4. Compute and analyze the capitalization table after the Series A investment, in case it is accepted and assuming that all SAFE holders convert their notes. What was the post-money valuation in this round?

Assuming that all SAFE holders convert their notes into preferred stock and that Series A is accepted, one should consider all these investors when computing the capitalization table. The analysis of the capitalization table is very important to understand the dilutive effects of the investment and the company's distribution after the investment.

Therefore, in order to start the computation of this table, one should calculate the share price at which each type of SAFE note will be converted. For the notes with a valuation cap, these holders will face a price per share that is the minimum between the Series A share price and the ratio of the valuation cap and the number of shares on a pre-series A timing. In fact, it is necessary to account for the number of shares relative to the two option pools that will be created in the Series A.

Therefore, before the Series A investment, there were, 8.5 million shares in the company. When accounting for the option pools this number immediately rises to 11.8 million. Thus, for the investors with a SAFE note with a valuation cap of 6.5 and 14 million, the respective share price would be \$0.55 and \$1.19, respectively. However, since these investors can convert their note at the lowest price between the Series A price and the one resultant from the note, and considering that this round's share price is \$0.95, the investors of the Second round of seed financing will be able to use this last value as share price. For the investors with a SAFE note with a discount (20%), the share price will be 80% of the Series A price. This is, \$0.76. (**Exhibit TN1** summarizes this information.)

As SAFE notes do not accrue any interest, the number of shares each investor will get is simply obtained by dividing the amount invested by the respective share price. Thus, according to the information provided in the **Exhibit 7** of the case, it would be issued, approximately, 3.6, 2.1 and 0.33 million shares for the 1st, 2nd and 3rd seed round investors, respectively. After this, considering both the common shares and shares relative to the stock option pools, Unbabel will have approximately a total of 17.9 million shares.

When considering Series A investors, one should calculate the number of shares issued to these investors by dividing the capital committed by the round's price per share. (**Exhibit TN2** condenses the number of shares given to each investor of the round of financing.) After the Series A investment, Unbabel will have a total amount of shares outstanding equal to 24.2 million, approximately.

The series A round of financing had considerably strong dilution effects for the founders and early investors, due to both the entrance of new investors and the conversion of the previously issued SAFE notes. In fact, both investors of the first and third rounds of seed of financing benefited from a lower share price than Series A price. This allowed them to convert the amount invested into a higher number of shares. The investors of the second round of seed financing and Series A, converted according to the same price. Due to the higher amount of capital raised in the last round,

the number of shares issued was the highest recorded. Additionally, founders and early investors were also diluted by the number of shares issued to the stock option pools.

All of these factors caused a serious dilution (**Exhibit TN3** resumes the difference in equity stakes on a pre and post Series A situation). It is important to consider that, as most of the founders were senior management team members, the dilution effect is diminished due to the existence of the ESO and SMT option pools. According to the appendix mentioned above, one can conclude that founders and André Silva decreased their total stake from 80.6% to 28.3%. This can make founders feel that they no longer hold their company and can't control the major decisions. The option pools represent an important incentive for founders to feel more included and motivated when there are dilution effects as in this case.

While founders suffered from dilution, some investors acquired a significant part of Unbabel's equity. Notion Capital is the investor with a higher stake (14.80%), followed by Caixa Capital that holds 11.05% of the company's equity. The holders of SAFE notes, excluding the investors that entered in more than one round hold a total of 19.10% of the Unbabel's equity. This percentage value was divided by 21 investors and, ignoring the investors that co-invested in the Series A, any of them was holding a higher percentage than 2.8% (**Exhibit TN4** contains a table with SAFE note holders' equity stakes in a post-series A situation). The Employee stock option and senior management team options pools represented, respectively, 5.38% and 8.27% of the company's equity. As for common stock, it amounted to 35.15% of Unbabel's equity.

In order to calculate the Post-Money valuation in case Unbabel accepts this proposal, it is necessary to divide Notion Capital's investment by the stake this fund acquires on a post-investment situation. Using these values, one can obtain a value of \$22.97 million. By doing this calculation for the other investors that entered in this round, it is possible to conclude that the values are equal across the four Series A investors. The equality of this result across the investors was expected, since they have entered in the same round. The same result can be obtained by multiplying the share price and the number of shares after the conversion of all SAFE notes.

5. What would be the implications to Series A investors if they have a participating versus conventional liquidation preference and Unbabel is sold by \$40 million in two years?

In order to properly calculate the implications of a participating versus conventional liquidation preference, it is important to understand the consequences of each of these clauses in case there is an exit.

Firstly, as stated in the term-sheet proposed, Series A investors have a participating convertible liquidation preference that is capped to a value of 3 times the initial investment. This means that in case the proceeds from participating convertible liquidation preference exceed the triple of the amount of capital invested, Series A participants are obliged to convert into common stock and participate with other common holders on a pro-rata basis. It is important to note that, typically, the participating preferred liquidation preference has a valuation cap associated and this feature ends if the investors exit the company via an IPO. This happens, since in an IPO the exit values are much higher, and the differences between having a conventional or participating liquidation preferences are minimal.

In a first scenario, it was assumed that investors have a participating liquidation preference and Unbabel is sold by \$40 million in two years. Considering that investors liquidation is 1x the original investment, the proceeds resultant from this sale would be equal to the amount invested plus the remaining proceeds as if investor's stock has been converted to common. It is important to calculate this for all Series A investors, in order to ensure that their proceeds do not exceed the maximum established valuation, otherwise they will have to convert into common stock. As it is exposed in **Exhibit TN5**, the payoff resultant from the sale does not exceed the valuation cap, meaning that the investors would not be obligated to convert their investment into common stock.

Exemplifying with the case of Notion Capital, with the participating feature, this investor would be entitled to receive \$3.4 million + 14.80% x (\$40 million - \$6 million) = \$ 8.4 million.

In a second scenario, investors are assumed to have a standard convertible liquidation preference. With 1x liquidation preference, investors would only convert into common stock in case their equity stake multiplied by the sale value exceeded the amount of the liquidation preference. Once more, the procedure has to be calculated for all Series A investors, all their stakes and investment amount differ from each other. Exemplifying for Notion Capital, the liquidation preference would be equal to amount investment, this is, \$3.4 million. If Notion Capital converts its investment into common equity, the respective payoff would be equal to 14.80% x 40 million = \$5.92 million. The standard convertible liquidation preference is a feature that allows the investor to choose between the maximum of the liquidation preference and pro rata share therefore, in this case, Notion Capital would choose to convert and its payoff would be \$5.92 million.

The results are similar to the other Series A investors. In case of the participating convertible liquidation preference, they would not be obligated to convert into common equity and, in case they have the conventional convertible liquidation preference, they would all chose to convert in order to have a higher payoff.

When comparing the two features, one can conclude that the participating convertible liquidation preference is associated with much higher returns. Not surprisingly, it is a very common feature among investors. In fact, using the case of Notion Capital once more, the participating and standard convertible liquidation preference would be associated to a IRR equal to 57% and 32% respectively. Also, the \$8.4 million under the participating feature, represents 21% of total exit proceeds, a value that exceeds the investor's equity stake of 14.80%.

All the previous calculations are exposed in **Exhibit TN5** that summarizes the differences and implications of a standard versus participating liquidation preference. Additionally, **Exhibit TN6** shows the diagram of a Series A investor's payoff with the two different liquidation preferences.

6. And in case there is a Series B financing round of \$30 million after the Series A at a share price equal to \$2? And equal to \$0.5? Is your answer similar in case Series A investors have a full ratchet anti-dilution protection?

In case there is a following round, namely a Series B, after the Series A it is important to understand and find which investor's terms that can be applied in case this happens.

According to the term sheet of the proposed investment, Series A investors would be entitled of standard pre-emption rights. With this, in case there is a subsequent financing round, Series A investors are entitled to acquire new series' shares according to their pro rata shareholding. Since there is no pay-to-play clause, if Investors decided not to acquire any more shares they would not lose their current terms and rights. Additionally, Series A investors have a right of first refusal, meaning that they can accept or refuse any purchase of shares of Unbabel, before potential buyers have access to the deal.

Besides the pre-emption rights, Series A investors, have a weighted average anti-dilution provision. When applied, this feature gives investor the right to purchase a certain number of shares, at a share price that takes into account the size of the new round of financing. In fact, the new conversion price is calculated according to the following formula:

$$\text{New conversion price} = \text{Series A conversion price} \times \frac{A + B}{C}$$

In which, A= N° of shares outstanding before new round, B= N° of shares issued in new round if it were issued at the Series A conversion price, C= N° of shares outstanding after the new round.

Therefore, in case there is a Series B financing round of \$30 million after the Series A at a share price equal to \$2, no anti-dilution rights will be triggered, since the share price exceeds the one from Series A. However, Series A investors have pre-emptive and right of first refusal, meaning that their dilution can still be avoided due to the right of investing in the following round. In contrast to this situation, in case the new financing round has a conversion price equal to \$0.5, besides the mention rights, investor will also play its anti-dilution protection. In this particular case, the new conversion price for Series A investors, according to the formula exposed above, would be, approximately:

$$\text{New conversion price} = \$0.95 \times \frac{55,759,717}{84,180,769} = \$0.63$$

In which A, B and C are calculated as follows, $A=24,180,769$, $B=30,000,000/0.95= 31,578,947$ and $C=25,016,186+ 30,000,000/0.5= 84,180,769$.

In fact, the weighted average anti-dilution rights do not prevent Investor's stake to decrease, however, this right allows the stake to remain higher than it would be without any anti-dilution rights.

There are several types of anti-dilution protection. The purpose of these rights is the same, however, the new conversion price that is applied can change. In fact, if Series A investors would have a Full ratchet anti-dilution protection, the answer would be different. In this type of anti-dilution, the previous round investor's conversion price decreases to the price of the new round. In contrast to the weighted average, the Full Ratchet anti-dilution does not take into account the size of the new round. Therefore, the new conversion price for Series A investors would be \$0.5. Due to a lower price when compared to the weighted average situation, the Series A investor's equity stake would still be lower than the initial but higher than the one with a weighted average anti-dilution protection.

Moreover, when there is a subsequent round and some investors have anti-dilution protection, Unbabel's common holders, that includes the founders in this situation, and other unprotected investors, are the ones that suffer the most and see their stakes decreasing by a higher proportion. When comparing a weighted average versus a full ratchet anti-dilution provisions, Unbabel's founders will preserve a higher stake in the first situation, since Series A investors remain with a lower stake.

7. If you were Vasco, would you accept Notion's offer as proposed, attempt to negotiate some terms or reject it? If you decide to negotiate, what modifications would you try to make?

The decision process entrepreneurs have to go through needs to explore and balance the specific investment's terms and its consequences for the future of the company. In this case, Vasco Pedro's was focused on the analysis of the liquidation preference, board representation and composition, employees' benefits packages and anti-dilution and pre-emption rights. According, to the term-sheet of the investment, it is possible to conclude that some of the terms were heavy weighted for Vasco Pedro and his co-founders. Moreover, the entrepreneur must also focus is decision on the impact that each term has on the distribution of returns.

Starting with the board representation and composition, as it was said in a previous question, its combination can be considered more entrepreneur friendly. In fact, 3 out of 5 board members should be designated by the founder's team, meaning that they control the majority of the board of directors. This is very appellative for Founders. Additionally, considering that Notion Capital, as a considerably strong expertise in the industry, having at least one board member of its choice, might be valuable to Unbabel.

Continuing the analysis with the terms that are not so cumbersome to Unbabel's founders, the distribution of the stock option pools was not considered to be a negative point of the proposed investment. Firstly, before this offer there were no shares reserved for this type of employee's benefits. With new investors, it is very important to ensure that both the founders and employees are perfectly aligned and committed to the start-up's success. The management teams of Unbabel would be rewarded with both an option pool reserved for them and an employee stock option pool. Considering that the management and leadership roles are very important to keep the mission delivery and performance improvement of Unbabel, this compensation packages would be of extreme importance. Additionally, the regular employees would also be rewarded with an option pool, which would allow to strengthen the commitment with Unbabel. In case the investment is accepted as it is proposed in the Term Sheet exposed in the case, the employee and senior management option pools would account for, 5.38% and 8.27% of the fully diluted capitalization table, respectively. Considering that the issuance of preferred stock, could be attached to the conversion of the 32 SAFE notes, a percentage of 13.65% of the company's total equity that was reserved for employee's compensation, should not be considered a low value.

When analysing Series A investors' liquidation preference, one can conclude that it is not favourable for Unbabel's founders. According to a previous answered question, the capped Participating Convertible Liquidation preference that investors have offers them much higher payoffs in case there is a sale or acquisition of Unbabel when compared to a standard convertible liquidation preference. Therefore, due to the seniority of these investors' shares compared to founder's common shares, the higher the payoff of the investors, the lower will be founder's one. (**Exhibit TN7** exposes the difference in founder's payoffs under the two liquidation preferences, excluding that there were other investors in the company). It is important to highlight that the existence of a valuation cap in the current terms, is beneficial for founders. Without it, they would not be obliged to convert into common stock at any point and would have higher payoffs. For investors, can also be seen as an advantage. The cap can act as an incentive to reach very high valuations, which would increase investor's payoffs.

Considering this, the liquidation preference should be a provision that Vasco Pedro should attempt to negotiate with Series A proposed investors. In order to negotiate, it is necessary to give an attractive term in return. Therefore, it was computed a waterfall distribution of returns considering to opposite situations. In the first one, the investment was assumed to be accepted as it is described in the case. In a second situation, it was assumed that Vasco Pedro managed to change the liquidation preference to a conventional one, while increasing the liquidation preference to 2x the amount of capital invested. For both cases, it was assumed that the exit would be in two years from October 2016, through a sale of \$40 million. As it is possible to see in **Exhibit TN8** and **TN9**, when there is a Participating Liquidation Preference with a 3x Cap, Series A investors receive, approximately, 37.2% of the Sale Value while Founders and Stock Option Pools receive, approximately, 47.7 % of that value. When changing to a 2x Conventional Liquidation Preference, these values decrease and increase to 30% and 53.3%, respectively.¹⁸

In spite of having a lower payoff, the 2x Liquidation Preference can still be attractive to investors, as they are entitled to receive up to the double of the invested capital plus any declared and unpaid dividends before anyone receives something. In a downturn situation, in which there is not enough liquidity to pay all stock holders, Series A investors could still receive more than the initial capital committed. For Vasco Pedro and his founding team, as well for the holders of the option pools, the Standard Liquidation Preference is much more preferable.

In order to proceed with the analysis, it is also important to analyse the anti-dilution and pre-emption rights. Pre-emption rights are very important to investors since, as it was already

¹⁸ The waterfall distribution was computed according to the seniority of the different share classes and assuming that more recent rounds have priority to more historic ones.

explained, give them the right to invest in possible subsequent financing rounds. Therefore, these rights act as anti-dilution rights. Due to their importance to investors, pre-emption rights become hardly negotiable. Regarding the anti-dilution rights, as it was stated in a previous question, it is much more dilutive and damaging for founders if investors have a Full Ratchet anti-dilution right. Moreover, in Unbabel's case, Series A investors are entitled of a weighted average anti-dilution right, which will be better for the common holders share class in case there is a subsequent round. In consequence, changing this right would only be worse for Founders.

As it is stated in the case, Vasco Pedro was not worried with the Valuation in which Series A investors were proposing to invest, as it was in line with the industry trends for 2016. However, the CEO and Co-founder of Unbabel was worried with the amount of capital that was being offered. If Unbabel managed to grow exponentially, its operating expenses would also grow. Unbabel was spending, approximately, and as stated in the case, \$360,000 among its costlier operating expenses. While this was happening, Revenues were fluctuating a lot month by month during 2016.

Vasco Pedro wanted his company to acquire a more developed and stable stage for its company. In order to reach this, Unbabel needed cash to expand its marketing, sales and R&D teams. On the one hand, it is very important the development of new products and constant adaptation to new market trends. However, it is also important to have a developed and strong sales and marketing team, otherwise the clients' portfolio and MRR will not grow.

Considering the analysis of the deal's terms, Vasco Pedro should negotiate the liquidation preference. However, in case he is not able to change to a standard convertible liquidation preference, he should still accept the investment. By October 2016, Unbabel had not reached the break-even point, and it would run out of cash in March 2017. Considering that it is very difficult to raise capital in the Venture Capital industry, accepting the investment would be the safest, but not the worse, decision. Furthermore, delaying the decision would only postpone an inevitable round of financing and both the deal and the terms presented by the investors did not justify its deferral. Also, by delaying the investment decision, Vasco Pedro could face a liquidity problem and run out of cash.

It is important to point out that, if Vasco was worried that the \$6.0 million offered were not enough and, at the same time, was worried with the dilutive effects of this deal, raising the amount invested in a Series A would only have less dilutive effects (i.e. Series A would retain a lower stake) if Unbabel's valuation decreased by a higher proportion than the increase in the capital invested. Disregarding this and considering only the terms of the offer, they would not be bad enough to reject the offer.

Aftermath

Despite some differences regarding the state of the company at that time, this case was based on the actual situation of Unbabel Inc in October 2016. The products and API integrations mentioned in the case are very close to the situation of the company by that time. However, with differences from the terms described in the case, in October 2016, Unbabel accepted a \$5 million Series A financing round from Notion Capital and Caixa Capital.

Exhibit TN1- Seed Rounds Conversion Prices

Total Common Shares Before Series A	8 500 000
SMT + ESOP number of shares	3 300 000
Total Number of Shares Prior to New Round of Investment	11 800 000

Seed Round	Conversion CAP Cap	Discount Rate Discount	Conversion Price
1st Seed Round	\$6 500 000	100%	\$0,55
2nd Seed Round	\$14 000 000	100%	\$0,95
3rd Seed Round	-	80%	\$0,76

For SAFE notes with CAP: $Conversion\ price = \frac{Valuation\ Cap}{Total\ Number\ of\ Shares\ Prior\ to\ New\ Round\ of\ Investment}$

For SAFE notes with Discount: $Conversion\ price = Conversion\ Price\ of\ New\ Round\ of\ Investment\ (1 - Discount)$

Exhibit TN2- Series A Investment at different Share Prices

Name	Capital Committed	Nº of Shares
Notion Capital	\$3 400 000	3 578 947
Caixa Capital	\$1 925 000	2 026 316
Faber Ventures	\$565 000	594 737
Shilling Capital Partners	\$110 000	115 789
Total	\$5 890 000	6 315 789

Exhibit TN3- Post Series A Capitalization Table

	Pre Series A		Post Series A						
	Common	%	Stock Pool	SAFE 1st seed round	SAFE 2nd seed round	SAFE 3rd seed round	SERIES A	TOTAL	%
Common									
Vasco Calais Pedro	1 800 000,00	21,18%						1 800 000,00	7,44%
Joao Varelas Graca	1 800 000,00	21,18%						1 800 000,00	7,44%
Bruno Prezado da Silva	820 000,00	9,65%						820 000,00	3,39%
Hugo Vieira da Silva	820 000,00	9,65%						820 000,00	3,39%
Sofia de Mello Pessanha	1 100 000,00	12,94%						1 100 000,00	4,55%
Andre Silva	510 000,00	6,00%						510 000,00	2,11%
Y-Combinator	600 000,00	7,06%		169 856,18				769 856,18	3,18%
Faber Ventures	525 000,00	6,18%		270 404,67	193 262,67		594 736,84	1 583 404,18	6,55%
Shilling Capital Partners	525 000,00	6,18%		167 493,05			115 789,47	808 282,53	3,34%
Series A									
Notion							3 578 947,37	3 578 947,37	14,80%
Caixa				424 640,45	221 920,61		2 026 315,79	2 672 876,84	11,05%
SAFEs				2 598 374,89	1 690 079,88	328 947,37		4 617 402,14	19,10%
Stock Plan									
ESO			1 300 000,00					1 300 000,00	5,38%
SMT			2 000 000,00					2 000 000,00	8,27%
Sub-total			3 300 000,00	3 630 769,23	2 105 263,16	328 947,37	6 315 789,47		
Final Number of Shares	8 500 000,00	100,00%	11 800 000,00	15 430 769,23	17 536 032,39	17 864 979,76	24 180 769,23	24 180 769,23	100,00%

Exhibit TN4- Post Series A Seed Investors' Equity Stakes

Note Holder	Round of financing	Conversion CAP	Discount Rate	Initial Principal	Interest Rate	Issuance Date	Share Price	Number of Shares	Equity Stake
Caffeinated Capital	2nd Seed Round	14 000 000	100%	\$168 660	0	May-15	\$0,95	177 536	0,7%
Matrix Partners X, L.P.	2nd Seed Round	14 000 000	100%	\$159 114	0	May-15	\$0,95	167 488	0,7%
Structure X Capital, LP	2nd Seed Round	14 000 000	100%	\$674 639	0	May-15	\$0,95	710 146	2,9%
Individual Investor A	2nd Seed Round	14 000 000	100%	\$16 866	0	May-15	\$0,95	17 754	0,1%
Individual Investor X	2nd Seed Round	14 000 000	100%	\$42 165	0	May-15	\$0,95	44 384	0,2%
Individual Investor Y	2nd Seed Round	14 000 000	100%	\$25 299	0	May-15	\$0,95	26 630	0,1%
Individual Investor W	2nd Seed Round	14 000 000	100%	\$16 866	0	May-15	\$0,95	17 754	0,1%
Individual Investor Z	2nd Seed Round	14 000 000	100%	\$9 546	0	May-15	\$0,95	10 049	0,0%
Fundersclub B52 LLC	2nd Seed Round	14 000 000	100%	\$323 762	0	May-15	\$0,95	340 803	1,4%
Workday Inc.	2nd Seed Round	14 000 000	100%	\$168 660	0	May-15	\$0,95	177 536	0,7%
Faber Ventures	2nd Seed Round	14 000 000	100%	\$183 600	0	May-15	\$0,95	193 263	0,8%
Caixa Capital	2nd Seed Round	14 000 000	100%	\$210 825	0	May-15	\$0,95	221 921	0,9%
Others- 1st seed round	1st Seed Round	6 500 000	100%	\$278 297	0	Jul-14	\$0,55	505 216	2,1%
DG Incubation, Inc	1st Seed Round	6 500 000	100%	\$116 956	0	Jul-14	\$0,55	212 320	0,9%
Matrix Partners X, L.P.	1st Seed Round	6 500 000	100%	\$275 841	0	Jul-14	\$0,55	500 757	2,1%
IDG Technology Venture Investment V, L.P.	1st Seed Round	6 500 000	100%	\$233 912	0	Jul-14	\$0,55	424 640	1,8%
zPark Venture, L.P.	1st Seed Round	6 500 000	100%	\$116 956	0	Jul-14	\$0,55	212 320	0,9%
Caffeinated Capital	1st Seed Round	6 500 000	100%	\$175 434	0	Jul-14	\$0,55	318 480	1,3%
Caixa Capital	1st Seed Round	6 500 000	100%	\$233 912	0	Jul-14	\$0,55	424 640	1,8%
Shilling Capital Partners	1st Seed Round	6 500 000	100%	\$92 263	0	Jul-14	\$0,55	167 493	0,7%
Faber Ventures	1st Seed Round	6 500 000	100%	\$148 952	0	Jul-14	\$0,55	270 405	1,1%
YCVC W14, LLC	1st Seed Round	6 500 000	100%	\$93 565	0	Jul-14	\$0,55	169 856	0,7%
Google Ventures 2014, L.P.	1st Seed Round	6 500 000	100%	\$233 912	0	Jul-14	\$0,55	424 640	1,8%
Neodymium, LLC	3rd Seed Round	0	80%	\$140 000,0	0	May-16	\$0,76	184 211	0,8%
Newsletter Innovations Ltd	3rd Seed Round	0	80%	\$110 000,0	0	May-16	\$0,76	144 737	0,6%

Note: Total Equity Stake of Seed Investors in this table is different than the one compared to the previous Exhibit. This happens since, in the previous Exhibit, Series A investors' that have entered in one or more Seed financing rounds, were excluded from the calculation of the final percentage value holder by seed investors. In this case, these investors were also considered therefore, the value increases from 19.10% to 25.08%.

Exhibit TN5- Participating versus Conventional Convertible Liquidation Preference

	Investment	1x liquidation preference	3x CAP	Equity Stake
Notion Capital	\$3 400 000	\$3 400 000	\$10 200 000	14,80%
Caixa Capital	\$1 925 000	\$1 925 000	\$5 775 000	8,38%
Faber Ventures	\$565 000	\$565 000	\$1 695 000	2,46%
Shilling Capital Partners	\$110 000	\$110 000	\$330 000	0,48%

Year	0	1	2
			Exit Value
			\$40 000 000
	40 000 000	2	

Participating Convertible Liquidation Preference w/ a CAP

	Payoff	Higher than CAP?	Convert?	Final Payoff	IRR
Notion Capital	\$8 432 272,11	No	No	\$8 432 272,11	57%
Caixa Capital	\$4 774 154,06	No	No	\$4 774 154,06	57%
Faber Ventures	\$1 401 245,22	No	No	\$1 401 245,22	57%
Shilling Capital Partners	\$272 808,80	No	No	\$272 808,80	57%

Total Series A Investors proceeds	\$14 880 480,19
Residual Value	\$25 119 519,81

Assuming the payoff reaches the established CAP value, the Investor will convert if: $3 \times \text{Investment} < \% \text{ Equity Stake} \times \text{Sale Value}$

Conventional Convertible Liquidation Preference

	Liquidation Preference	Converting into common	Convert?	Final Payoff	IRR
Notion Capital	\$3 400 000,00	\$5 920 320,13	Yes	\$5 920 320,13	32,0%
Caixa Capital	\$1 925 000,00	\$3 351 945,95	Yes	\$3 351 945,95	32,0%
Faber Ventures	\$565 000,00	\$983 817,90	Yes	\$983 817,90	32,0%
Shilling Capital Partners	\$110 000,00	\$191 539,77	Yes	\$191 539,77	32,0%

Total Series A Investors proceeds	\$10 447 623,75
Residual Value	\$29 552 376,25

Investor will convert if: $\% \text{ Equity Stake} \times \text{Sale Value} > \text{Liquidation Preference}$

Note: $IRR = \left(\frac{\text{Payoff at Exit}}{\text{Investment}} \right)^{\frac{1}{\text{No. of years to exit}}} - 1$

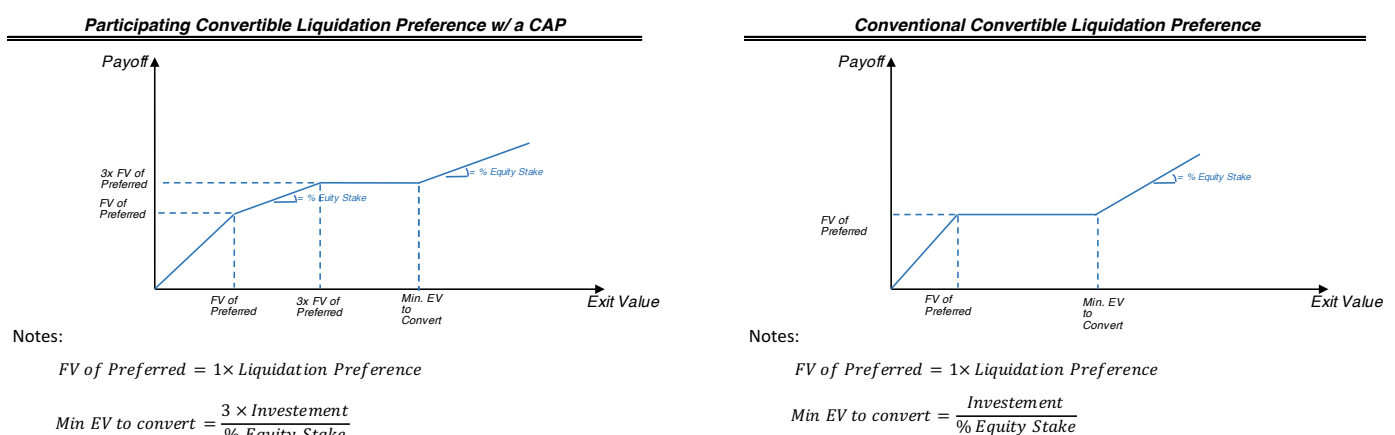
Exhibit TN6- Investors' payoff comparison between Participating and Conventional Convertible Liquidation Preference

Exhibit TN7- Founders' payoff comparison between Participating and Conventional Convertible Liquidation Preference

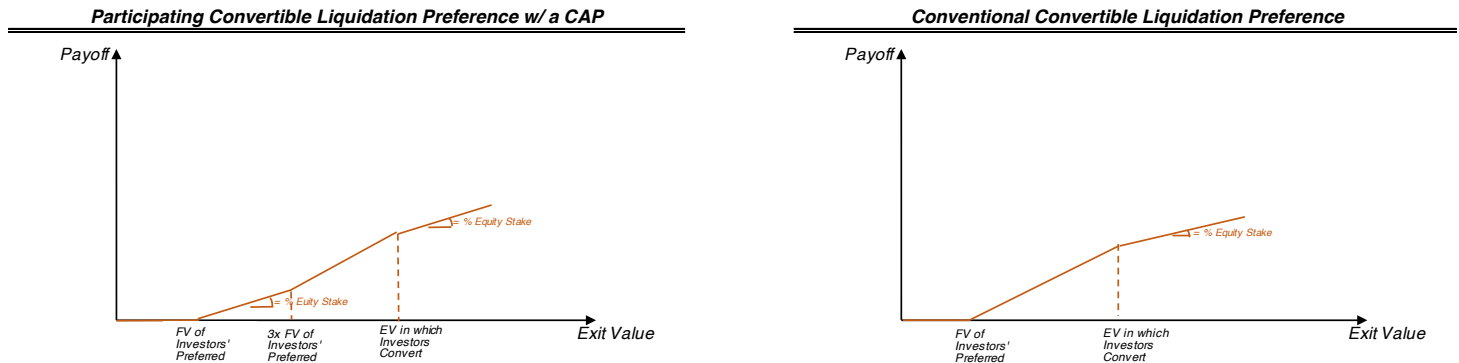


Exhibit TN8- Waterfall Distribution of Returns 2x Conventional Liquidation Preference

Series A Investors Payoff

	Payoff
Notion Capital	6 800 000,00
Caixa Capital	3 850 000,00
Faber Ventures	1 130 000,00
Shilling Capital Partners	220 000,00
Total \$ distributed	12 000 000,00
Residual after payment	28 000 000,00
% of the Sale Value	30,0%

3rd Seed Investment

	Amount Invested	1x liquidation preference	% Equity Stake	IF convert	Will They convert?	Final Payoff
Neodymium, LLC	140 000	140 000	0,8%	304 722	Yes	304 722,36
Newsletter Innovations Ltd	110 000	110 000	0,6%	239 425	Yes	239 424,71
Total \$ distributed	544 147,07					
Residual after payment	27 455 852,93					
% of the Sale Value	1,36%					

2nd Seed Investment

	Amount Invested	1x liquidation preference	% Equity Stake	IF convert	Will They convert?	Final Payoff
Caffeinated Capital Fund I, LP	168 659,66	168 659,66	0,7%	201 582,32	Yes	201 582,32
Matrix Partners X, L.P.	159 113,52	159 113,52	0,7%	190 172,76	Yes	190 172,76
Structure X Capital, LP	674 638,65	674 638,65	2,9%	806 329,29	Yes	806 329,29
Individual Investor A	16 865,97	16 865,97	0,1%	20 158,23	Yes	20 158,23
Individual Investor X	42 164,92	42 164,92	0,2%	50 395,58	Yes	50 395,58
Individual Investor Y	25 298,95	25 298,95	0,1%	30 237,35	Yes	30 237,35
Individual Investor W	16 865,97	16 865,97	0,1%	20 158,23	Yes	20 158,23
Individual Investor Z	9 546,14	9 546,14	0,0%	11 409,56	Yes	11 409,56
Fundersclub B52 LLC	323 762,46	323 762,46	1,4%	386 961,46	Yes	386 961,46
Workday Inc.	168 659,66	168 659,66	0,7%	201 582,32	Yes	201 582,32
Faber Ventures	183 599,53	183 599,53	0,8%	219 438,49	Yes	219 438,49
Caixa Capital	210 824,58	210 824,58	0,9%	251 977,90	Yes	251 977,90
Total \$ distributed	2 390 403,51					
Residual after payment	25 065 449,42					
% of the Sale Value	5,98%					

1st seed investors

	Amount Invested	1x liquidation preference	% Equity Stake	IF convert	Will They convert?	Final Payoff
Others- 1st seed round	278 296,93	278 296,93	2,1%	523 699,86	Yes	523 699,86
DG Incubation, Inc	116 956,05	116 956,05	0,9%	220 088,19	Yes	220 088,19
Matrix Partners X, L.P.	275 840,86	275 840,86	2,1%	519 078,00	Yes	519 078,00
IDG Technology Venture Investment V, L.P.	233 912,11	233 912,11	1,8%	440 176,39	Yes	440 176,39
zPark Venture, L.P.	116 956,05	116 956,05	0,9%	220 088,19	Yes	220 088,19
Caffeinated Capital Fund I, LP	175 434,08	175 434,08	1,3%	330 132,29	Yes	330 132,29
Caixa Capital	233 912,11	233 912,11	1,8%	440 176,39	Yes	440 176,39
Shilling Capital Partners	92 263,12	92 263,12	0,7%	173 620,97	Yes	173 620,97
Faber Ventures	148 951,72	148 951,72	1,1%	280 297,72	Yes	280 297,72
YCVC W14, LLC	93 564,84	93 564,84	0,7%	176 070,55	Yes	176 070,55
Google Ventures 2014, L.P.	233 912,11	233 912,11	1,8%	440 176,39	Yes	440 176,39
Total \$ distributed	3 763 604,94					
Residual after payment	21 301 844,48					
% of the Sale Value	9,41%					

Common Shareholders and Options			
	% Equity Stake	Equivalent Equity Stake	Final Payoff
Vasco Calais Pedro	7,44%	15,3%	3 249 433,90
Joao Varelas Graca	7,44%	15,3%	3 249 433,90
Bruno Prezado da Silva	3,39%	6,9%	1 480 297,67
Hugo Vieira da Silva	3,39%	6,9%	1 480 297,67
Sofia de Mello Pessanha	4,55%	9,3%	1 985 765,16
Andre Silva	2,11%	4,3%	920 672,94
Y-Combinator	2,48%	5,1%	1 083 144,63
Faber Ventures	2,17%	4,4%	947 751,56
Shilling Capital Partners	2,17%	4,4%	947 751,56
ESO	5,38%	11,0%	2 346 813,37
SMT	8,27%	16,9%	3 610 482,12
Total %	48,80%	100,0%	
Total \$ distributed 21 301 844,48			
Residual after payment 0,00			
% of the Sale Value 53,25%			

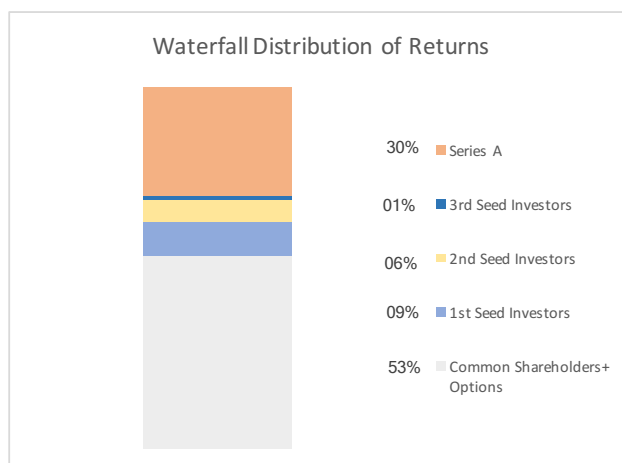


Exhibit TN9- Waterfall Distribution of Returns with 1x Participation Convertible Liquidation Preference with 3x Cap

Series A Investors Payoff	
	Payoff
Notion Capital	8 432 272,11
Caixa Capital	4 774 154,06
Faber Ventures	1 401 245,22
Shilling Capital Partners	272 808,80
Total \$ distributed 14 880 480,19	
Residual after payment 25 119 519,81	
% of the Sale Value 37,2%	

3rd Seed Investment						
		1				
	Amount Invested	1x liquidation preference	% Equity Stake	IF convert	Will They convert?	Final Payoff
Neodymium, LLC	140 000	140 000	0,8%	304 722	Yes	304 722,36
Newsletter Innovations Ltd	110 000	110 000	0,6%	239 425	Yes	239 424,71
Total \$ distributed 544 147,07						
Residual after payment 24 575 372,74						
% of the Sale Value 1,36%						

2nd Seed Investment						
	Amount Invested	1x liquidation preference	% Equity Stake	IF convert	Will They convert?	Final Payoff
Caffeinated Capital Fund I, LP	168 659,66	168 659,66	0,7%	180 433,69	Yes	180 433,69
Matrix Partners X, L.P.	159 113,52	159 113,52	0,7%	170 221,14	Yes	170 221,14
Structure X Capital, LP	674 638,65	674 638,65	2,9%	721 734,74	Yes	721 734,74
Individual Investor A	16 865,97	16 865,97	0,1%	18 043,37	Yes	18 043,37
Individual Investor X	42 164,92	42 164,92	0,2%	45 108,42	Yes	45 108,42
Individual Investor Y	25 298,95	25 298,95	0,1%	27 065,05	Yes	27 065,05
Individual Investor W	16 865,97	16 865,97	0,1%	18 043,37	Yes	18 043,37
Individual Investor Z	9 546,14	9 546,14	0,0%	10 212,55	Yes	10 212,55
Fundersclub B52 LLC	323 762,46	323 762,46	1,4%	346 364,11	Yes	346 364,11
Workday Inc.	168 659,66	168 659,66	0,7%	180 433,69	Yes	180 433,69
Faber Ventures	183 599,53	183 599,53	0,8%	196 416,50	Yes	196 416,50
Caixa Capital	210 824,58	210 824,58	0,9%	225 542,11	Yes	225 542,11
Total \$ distributed	2 139 618,73					
Residual after payment	22 435 754,01					
% of the Sale Value						
	5,35%					

1st seed investors						
	Amount Invested	1x liquidation preference	% Equity Stake	IF convert	Will They convert?	Final Payoff
Others- 1st seed round	278 296,93	278 296,93	2,1%	468 756,85	Yes	468 756,85
DG Incubation, Inc	116 956,05	116 956,05	0,9%	196 998,05	Yes	196 998,05
Matrix Partners X, L.P.	275 840,86	275 840,86	2,1%	464 619,89	Yes	464 619,89
IDG Technology Venture Investment V, L.P.	233 912,11	233 912,11	1,8%	393 996,09	Yes	393 996,09
zPark Venture, L.P.	116 956,05	116 956,05	0,9%	196 998,05	Yes	196 998,05
Caffeinated Capital Fund I, LP	175 434,08	175 434,08	1,3%	295 497,07	Yes	295 497,07
Caixa Capital	233 912,11	233 912,11	1,8%	393 996,09	Yes	393 996,09
Shilling Capital Partners	92 263,12	92 263,12	0,7%	155 405,85	Yes	155 405,85
Faber Ventures	148 951,72	148 951,72	1,1%	250 890,80	Yes	250 890,80
YCVW14, LLC	93 564,84	93 564,84	0,7%	157 598,44	Yes	157 598,44
Google Ventures 2014, L.P.	233 912,11	233 912,11	1,8%	393 996,09	Yes	393 996,09
Total \$ distributed	3 368 753,27					
Residual after payment	19 067 000,74					
% of the Sale Value						
	8,42%					

Common Shareholders and Options			
	% Equity Stake	Equivalent Equity Stake	Final Payoff
Vasco Calais Pedro	7,44%	15,3%	2 908 525,54
Joao Varelas Graca	7,44%	15,3%	2 908 525,54
Bruno Prezado da Silva	3,39%	6,9%	1 324 994,97
Hugo Vieira da Silva	3,39%	6,9%	1 324 994,97
Sofia de Mello Pessanha	4,55%	9,3%	1 777 432,27
Andre Silva	2,11%	4,3%	824 082,24
Y-Combinator	2,48%	5,1%	969 508,51
Faber Ventures	2,17%	4,4%	848 319,95
Shilling Capital Partners	2,17%	4,4%	848 319,95
ESO	5,38%	11,0%	2 100 601,78
SMT	8,27%	16,9%	3 231 695,04
Total %	48,80%	100,0%	
Total \$ distributed	19 067 000,74		
Residual after payment	0,00		
% of the Sale Value			
	47,67%		

